

REMARKS

Claims 1-6 are pending in this application. By this Amendment, the Abstract is amended. No new matter is added by this Amendment. Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

The Office Action objects to the specification for informalities. Specifically, the abstract is objected to. The Abstract is amended to obviate the objection. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to the specification.

The Office Action rejects claims 1-6 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0235229 to Deng et al. (hereinafter "Deng") in view of U.S. Patent Application Publication No. 2005/0089075 to Baba et al. (hereinafter "Baba"), and further in view of JP 2000-332351 to Noda et al. Applicants respectfully traverse this rejection.

It appears the Office Action improperly cites JP 2000-332351 to Noda et al. and should instead cite JP 2003-273455 to Noda et al. The Office Action on page 4, in paragraphs 10 and 11, asserts that JP 2000-332351 has a Fig. 5C. However, JP 2000-332351 does not have a Fig. 5C. Instead, JP 2003-273455, which was filed in the same Information Disclosure Statement as JP 2000-332351, has a Fig. 5c, as described in the attached partial translation of JP 2003-273455. Accordingly, Applicants base the following remarks, in response to the rejection, on JP 2003-273455 (hereinafter "Noda") and traverses the rejection based upon this understanding.

The Office Action asserts the applied references in combination teach all the features recited in independent claim 1. However, the applied references either individually, or in combination, do not teach, nor would have suggested a surface-emitting laser light source using a two-dimensional photonic crystal including at least "a plane shape of each modified

refractive index area on a side opposite from the active layer is smaller than that on another side facing the active layer," as recited in claim 1.

The Office Action concedes that Deng and Baba fail to teach this feature and relies on Noda, in Fig. 5C to cure this deficiency. However, Noda, in Fig. 5C and paragraph [0032], illustrates the periodic structure 21b with the smaller side on the side facing the active layer 13 instead of on the side opposite from the active layer 13, which is contrary to what the Office Action asserts. The period structure 21b corresponds to a "modified refractive index area" of the pending claims. Therefore, Noda does not teach, nor would have suggested, "a plane shape of each modified refractive index area on a side opposite from the active layer is smaller than that on another side facing the active layer," as recited in claim 1.

Deng and Baba fail to disclose, nor would have suggested, the above feature, and therefore, fail to make up for the above-noted deficiency of Noda.

For at least the reasons above, the applied references individually, or in combination, cannot reasonably be considered to teach, nor would have suggested, the combinations of all the features recited in at least independent claim 1. Further, claims 2-6 would also not have been suggested by the applied references for at least the respective dependency of these claims on allowable independent claim 1, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-6 under 35 U.S.C. §103(a) are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Tiffany J. Brooks
Registration No. 57,912

JAO:TJB/wkb

Attachments:

Amended Abstract
Petition for Extension of Time
Partial Translation of JP 2003-273455

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OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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ABSTRACT

~~The present invention intends to provide~~Providing a surface-emitting laser light source capable of generating a linearly polarized laser light having a single-lobed beam profile that takes the largest intensity value in its central area. A two-dimensional photonic crystal consisting of a plate ~~member 31~~member with holes ~~311 or 312~~ arranged in a square lattice pattern is provided on one side of an active ~~layer 23~~layer. The ~~hole 311 or 312~~ is holes are designed so that its plane shape on the emission side (plane "B") is smaller than that on the active layer side (plane "C"). The center of gravity of the shape on plane "B" is displaced from that of the shape on plane "C" in the in-plane direction. This design lowers the degree of the in-plane symmetry of the two-dimensional photonic crystal, so that a linearly polarized laser light having a single lobe is obtained.